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PROJECT REPORT

To initiate the Recreation Opportunity Spectrum Concept into the planning and management in the National Forests of the Intermountain Region

Professional Development
for Outdoor Recreation Management

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I. Background

A. Historical perspective

Recreation planning in the Intermountain Region has traditionally consisted primarily of construction and management of developed campgrounds. The National Forests Recreation Survey (NFRS) of 20 years ago was mainly an inventory of potential sites suitable for development. Subsequently, planning emphasis was aimed at preparing designs and site plans for developing these sites, and management emphasis was aimed at construction and operation of them. Many were developed in stages, as construction funds were available, and in some cases, operation and maintenance funds were used to provide facilities where site plans and construction funds lagged. This resulted in the evolution of numerous small campgrounds. The evolutionary process began to reverse itself in the mid-1960's when recreation management funds became very limited, and not only was there no money for campground construction, but operation and maintenance budgets were so limited that the smaller campgrounds were found to be too uneconomical to retain.

There was a surge in environmental awareness by the general public in the late 1960's, and an accompanying acceleration in interest and use of wilderness. Awareness, interest, and use by recreationists spread to other parts of the National Forests both from wilderness and from developed sites. Planning for and management of wilderness and potential wilderness received vastly increased emphasis during

the 1970's, as exemplified by RARE I, RARE II, and by the improved effort and resultant quality in wilderness and quasi-wilderness management apparent during the same period. This is typified in the Intermountain Region, perhaps, by the West Slope of the Tetons, the Middle Fork Salmon River and other notable places.

Although some coordination with other resources and uses was accomplished through the Multiple Use Plan processes and subsequent Multiple Use Survey Reports, Environmental Analyses, and Environmental Impact Statements, recreation planning was generally functional (i.e., considered only the recreation function with little regard for effects on other on-site or nearby resources) and was generally responsive--or reactive--only to localized demands as expressed by existing uses.

B. Planning perspective and conceptual framework of the Recreation Opportunity Planning System

The National Forest Management Act (NFMA) of 1976, and the subsequent regulations to implement it, provided the impetus and procedures for integrating all resources on a National Forest into a comprehensive plan. The National Forest Management Plans will, ideally, interrelate the various resources and uses available in each National Forest and provide for balancing the supplies and demands for each. A system of identifying and measuring the supply and demand situation for each resource and use, in a way that comparisons and evaluations with competing and alternative resources and uses can be made, is necessary.

Initiating the Recreation Opportunity Spectrum Concept in the planning and management of the National Forests of the Intermountain Region.

F.S. Elder, February 1980

Abstract/Summary

The Recreation Opportunity Spectrum (ROS) concept has been adapted to provide a systematic approach to integrating the planning for recreation opportunities in the National Forests into the National Forest Land and Resource Plans being prepared according to the National Forest Management Act. The ROS concept considers the relationships of recreation activities and the settings where these activities may take place. The resulting recreation experiences are then categorized into six classes representing the diverse range of situations that may occur in the National Forests.

The Recreation Opportunity Planning (ROP) system provides the methods to analyze the current and potential "supply" of settings, and the predicted demand for those settings in which certain activities will yield the publics desired recreation experience. With this information, managers can compare the supply/demand relationships for the National Forest recreation situation with those for other resources and uses, both by amount and location. He can then make the decisions on where and to what extent the National Forest will be managed to balance the supply with the demand.

Because the present instructions are, of necessity, broad and general, their initial application generates certain problems and questions. Some of these can be foreseen, and some preliminary solutions and answers are suggested. Since the 16 National Forests in the Intermountain Region are all on different schedules to complete their Forest Plans by December 1981, the earlier National Forests in the process will be used empirically to refine the ROP system and alternative approaches to some of the problems.

Plans for implementing ROP in the Intermountain Region have been made and are under way. These include providing training to each National Forest, followup assistance with the Forests as they proceed, and monitoring, modifying, and refining the process.

Land and resource management planning regulations require that "...a broad spectrum of dispersed and developed recreation opportunities in accord with identified needs and demands will be provided." The regulations also require that the planning will consider user preferences and the settings needed to provide quality recreation opportunities. The Forest Service Roles in Outdoor Recreation likewise provides that the National Forests shall be planned to provide a variety of appropriate opportunities for outdoor recreation.

Recreational opportunities have four components, the first three of which are all considered in the Recreation Opportunity Planning (ROP) system. These components are activity opportunities (AO's), setting opportunities (SO's), experience opportunities (EO's), and lasting benefit opportunities (LBO's). Little explanation is needed of AO's, which define the opportunity (or real choice) to participate in a desired recreational activity, such as picknicking, sailing, canoeing or cross-country skiing. The SO is defined as the opportunity to participate in the desired AO in a preferred environmental setting, which has three sub-components: (1) the preferred physical setting; (2) the preferred social setting; and (3) the preferred management setting. For example, a participant preferring the AO of downhill-lift skiing might prefer a SO characterized by expert runs and little air pollution (characteristics of the physical setting), few people on the slope (social setting) and lift tickets that are not expensive in price (managerial setting).

The third component of a recreation opportunity, or the experience opportunity (EO), is defined as the opportunity for a recreationist to

realize a particular type of preferred recreation experience (RE) from participating in a preferred activity in a preferred setting. A RE is defined as the recreationists' total psychological and physiological response from using a specific AO and a specific SO. Over the past 10 years, recreation behavioral research on user preferences has made good progress in defining the nature and relative intensity of recreationists' demands for different types of RE's by users of different AO's and SO's. That research, which forms the empirical basis for the ROP system, has proceeded by identifying those types of satisfactions (benefits) that are both desired and expected by participants in a particular activity in a particular setting. These satisfactions, or perceived benefits include, but are not limited to, things such as getting exercise, exploring, enjoying natural settings, developing skills, sharing skills (especially with one's children), learning, being creative, taking risk or being challenged, being with friends, resting mentally or physically, escaping temporarily a wide variety of mundane conditions experienced in home and work environments, and so on.

More relevant to the development of the ROP system, the recreation behavioral research has shown that participants engage in a chosen activity in a preferred environmental setting to realize a particular set of immediate benefits, or satisfactions, that are valued most highly as reasons for participating in that activity. The number of these most highly perceived benefits vary from activity to activity, but recent studies indicate that from 5 to 10, from among over 40 identifiable and measurable benefits, tend to be valued for a particular type of activity. Those most highly valued perceived

benefits, or types of satisfactions, define an EO for a particular user.

The fourth component of a recreation opportunity was listed as the lasting benefit opportunities (LBO's). Those LBO's define the more lasting ways (i.e., beyond perceived immediate benefits) that users benefit from OR participation. These LBO's include better mental or physical health from exercising or relaxing, learning benefits from nature or cultural resource study, social benefits such as increased family solidarity, or increased quantity or quality of subsequent work performance.

The planning process provides that "demands" in the general sense, will be identified by a combination of two means. First are issues, developed both locally and Regionally derived from the interested publics; that is, the public expresses its "demand" for certain goods and services through public involvement processes. The national program derived from the Resources Planning Act (RPA) assessment is disaggregated to the Regions and becomes a second type of "demand" when it is further disaggregated and allocated to each National Forest in the form of targets, goals, and objectives in the Regional Plan. Similarly, but less directly than the demands expressed as issues identified by Regional and local publics, the "demands" assigned by the Regional Plan as disaggregated from the national RPA Program likewise are an expression of issue identification since they, too, stem from initial local input and public involvement at all levels. There should, therefore, be sufficient similarity that the combined "demands" results are meaningful. Significant dissimilarities or

inconsistencies must be resolved by confirming information or by negotiation.

Determination of "supply" is an inventory and capability analysis process. This must be accomplished in a form that can be related to "demand," and similarly in a form that can be related to other resources and uses. Area or acreage is the most useful common denominator for these purposes.

Mandatory completion of the National Forest planning process is required by 1985; the current Forest Service goal is to prepare National Forest Management Plans for all National Forests by December 1983. The Regional Plan is scheduled for completion early 1981.

II. Current Recreation Opportunity Planning Instructions

The Recreation Opportunity Planning System is described in detail in the Appendix. These are the guidelines now in use to convert the Recreation Opportunity Spectrum concept from theory to application. These guidelines are the basis for implementing the system in the Forest planning process. They were developed over the past 2 years, and are in the final stages of their evolution. They are relatively simple, complete, and understandable, and should provide the necessary instructions for each National Forest recreation planner to use in integrating recreation into the Forest Plan. Despite this, there are gaps and shortcomings in the instructions that will require supplementation and assistance to bridge and overcome. Some of these are inherent or unavoidable. The breadth of the instructions and their usefulness on a Service-wide basis precludes their specificity to local situations. The time frame of their development relative to other planning phases and process development creates a yet-to-be accomplished coordination need with Regional and National planning operations.

III. Intermountain Region Recreation Opportunity Spectrum Implementation.

A. The project consists of three phases or operations:

1. Introduction and orientation of the system to Region 4 recreation, planning and other personnel.

2. Continued training and assistance to lead National Forests as planning efforts progress.

3. Resolving problems; expanding, improving and modifying instructions.

B. The first phase is partially complete.

1. The Recreation Opportunity Spectrum concept was introduced and briefly explained to recreation personnel during functional assistance trips to the Payette National Forest and Targhee National Forest. (November 1979)

2. The interrelationships of NFMA, Land and Resources Management Planning and the ROS system were included in the agenda of a 3-day training session for 110 dispersed recreation management personnel from all 16 Region 4 National Forests. (November 1979)

3. Basic instruction in the Recreation Opportunity Planning System was provided to the recreation planners and Forest planning team leaders from 14 of the 16 National Forests. (January 1980)

4. Introduction to R.O.S. with sign coordinators from the National Forests of the Region, with emphasis on the relationship of signs and the managerial setting.

5. Basic instruction in the Recreation Opportunity Planning System is scheduled for the two National Forests who missed the January session. (April 1980)

C. Phase 2 and phase 3 will continue concurrently.

1. Arrangements are being made to participate directly with the lead National Forests as they implement the system.

2. This participation will be aimed at helping these National Forests use the existing instructions and guidelines.

3. It will also help to "surface" the problem areas; the gaps, shortcoming, and inadequacies in the guidelines and in the system.

4. Some of these problems are already identified and efforts are underway to find solutions.

IV. Problems - The instructions (Appendix) are most complete and thorough regarding the inventory (supply) phase of the effort. Good criteria and guidelines have been developed. Other aspects of the system are less complete and need more attention and supplementation.

A. Demand - The current instructions for the planning process recognize that precise determinations of demand are not economically nor administratively feasible at this stage. This shortcoming in this key phase of the process concerns many.

1. The apprehension about total high quality, intensive demand analysis, however, is apparently not necessarily valid. Review of existing demand studies indicates that:

a. Detailed data for current and projected demand is unnecessary for the broad decisions required for most National Forest planning areas. Available information from existing sources is adequate when evaluating activities which by preliminary screening (seat-of-the-pants judgments) are not critical. That is, where resource values are low, inventoried settings are high, and activity opportunities plentiful, there is a wide margin for error and risks are minimal.

b. More detailed data is already available in more critical situations. Where resource values are high, inventories low, and activities limited, this has been recognized by past public expression and management awareness, and

intensive use data and projections have been developed. Examples of this are the ski area demand studies and detailed statistics on downhill skiing, and the reasearch and management efforts at key locations such as the Middle Fork Salmon River and several Wilderness and Primitive Areas in the Intermountain Region. Where the margin for error is slim and risks are high, adequate information for demand purposes is generally at hand.

c. For the many cases which are neither "safe" nor critical, there will be reasonable information available for the short-term needs from the public response phase of the planning effort and from other sources such as SCORP, RIM trends, H.C.R.S., recreation industry and user organizations (American Motorcycle Association, American Canoe Association, Sierra Club) for mid- and long-term purposes.

d. Demand has not been dealt with to this point in the context of the Recreation Opportunity Spectrum. National and Regional planning documents address demand in terms of developed, dispersed, and wilderness. Public input and issue identification is activity-oriented. Solution to this will be approached from three directions:

(1) Short-term or interim. Develop a method to translate the broad activity-oriented issues and

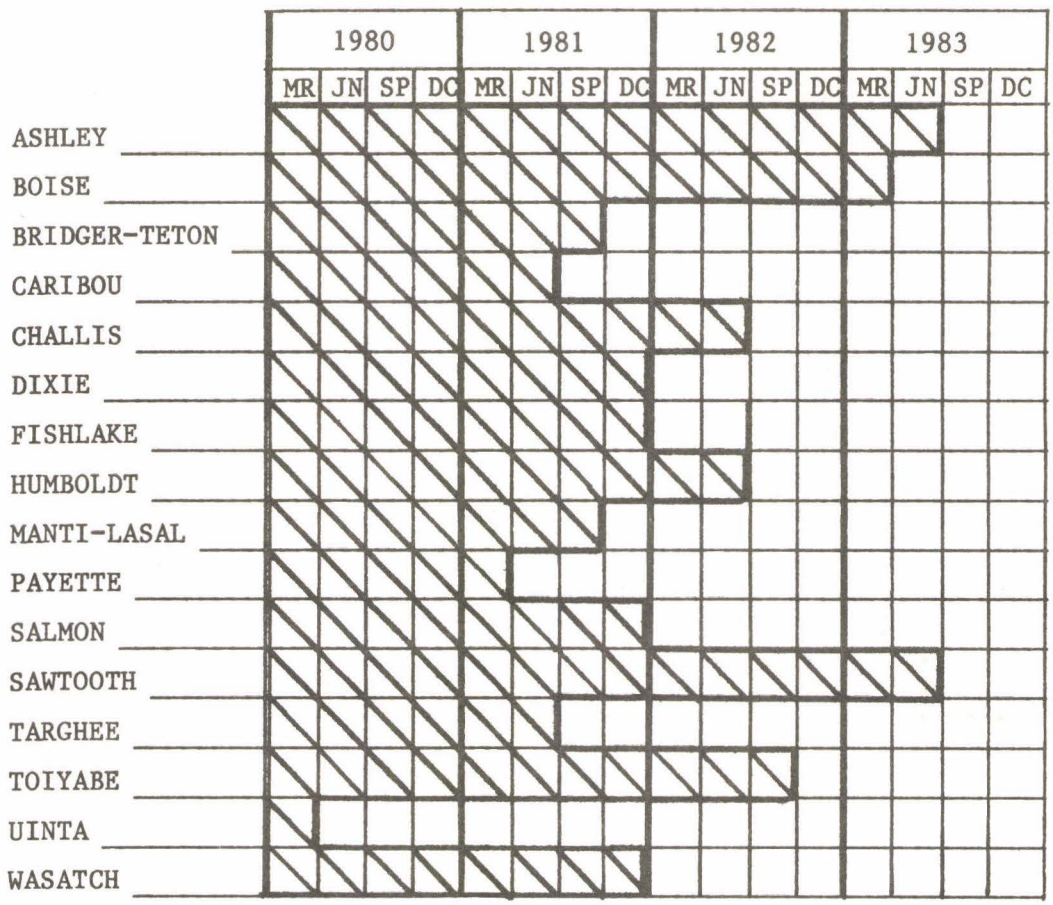
public comments into R.O.S. terms. The chart in Figure 1 shows the general planning schedule for Intermountain Region National Forests.

While the Uinta National Forest is closest to completion of a draft Forest Plan, R.O.S. concepts have barely been incorporated at this point. This will be accomplished prior to completion of their draft plan. The mapping, capability analysis, capacity and demand analyses will be initiated in late February and completed by late March, for integration into their draft plan. Regional Office personnel will actively participate in this to assist with the process and monitor the problems encountered. The feedback from that, and from the responses to the draft plan review, will be useful in assisting the other National Forests as they commence with their planning.

The next two Forests, the Caribou and Targhee, will be test cases in further refining the process. Both of these National Forests are just getting underway with solicitation of input, issue analysis, and identification of management concerns and opportunities. Translating these into R.O.S. terms and classes will be the real beginning of actual R.O.P. for any of the National Forests in this Region. Direct assistance to these

FIGURE 1

TARGET DATES, BY NATIONAL FOREST,
FOR COMPLETION OF DRAFT FOREST PLAN



National Forests will be provided, and the findings (obstacles, techniques) found during this will be passed on to the other National Forests.

(2) Mid-term. The schedule for the Bridger-Teton and Payette National Forests will allow a different approach. We will try to solicit initial and subsequent public input in R.O.S. terms from the outset. This will involve a degree of explanation and education that will be difficult to achieve, so we are not optimistic that this will be very successful in the short time involved, but public understanding must eventually be achieved, and the methods for achieving it utilized with the rest of the National Forests.

(3) Long-term/Internal--To produce Regional Plan direction to the National Forests in a form that is meaningful to recreation planners. The Region's procedural guide for land systems inventory is currently being revised to incorporate R.O.S. methods.

Although there must eventually be recognition of Recreation outputs in R.O.S.-related terms at all Forest Service levels and planning operations (RPA, PAMARS), the relevant goal in R.O.P. is to direct the National Forests to provide the opportunities that are most responsive to the issues and concerns. The

Regional Guidance Document provides very good but very broad guidelines applicable to all National Forests in the Region. The first Regional Plan will further prescribe types and amounts of recreation opportunities each National Forest is to provide, but of necessity, this will still be in terms of Developed, Dispersed, and Wilderness Recreation.

We will assist the National Forests in interpreting and further categorizing this into R.O.S. utility. This can be done, on a Forest-by-Forest basis, by comparison of Regional direction with issues and concerns.

Regional objectives and targets, in the Program Development and Budgeting (PD&B) System, will be specifically defined in terms of Management Information Handbook (MIH) codes. The MIH codes presently deal with Developed, Dispersed, Wilderness, and Trails elements of recreation management. The opportunity to expand the MIH system to accommodate R.O.S. is unmistakeable. This will be the primary vehicle for meshing RPA, PD&B, PAMARS, R.O.S. and the Regional Plan. Preliminary efforts to accomplish this are underway.

B. Capacity

Historical and traditional Forest Service management of other resources has led to the concept of "capacity." Formal direction

to address recreation resource capacity is now found in the National Forest Land and Resources Management Planning Regulations and in the adoption of the Forest Service Roles in Outdoor Recreation.

There are no hard and fast criteria for determining recreation capacity. The recreation planners participating on each planning team must develop the specific capacity criteria to be applied for any given planning area. Relative densities of use for each recreation opportunity class should be adhered to, however. For example, primitive zones would have less relative capacity than rural or semi-rural zones because of the importance of low densities to the achievement of satisfactory recreation experiences. The actual capacities selected must be based on the professional judgment of the planner using the best information available about the ability of the resource base and facilities to meet both social and resource objectives. Resource managers have generally focused on impacts to the physical or biological resource to determine capacities. The sociological factor is critical, however, in recreation planning. As with demand analysis, managers are apprehensive about making estimates without firm data from user surveys or research backup. Conversion factors (PAOT/RVD, PAOT/A, RVD/A) lack immediate credibility.

As the National Forests progress into the capacity determination phase of their planning, local adjustments to the guidelines coefficients may be indicated. Oversight of these adjustments will be provided to maintain consistency and gain credibility.

Again, as with demand estimates, the apprehension about lack of accuracy or precision may be excessive. For the broad planning purposes and allocation decisions necessary, there is likely adequate information available. In critical situations, such as heavily impacted areas, capacity determinations have already been made and can be readily converted to test coefficients. This will be the primary method to gain acceptance of the concept.

C. Management Guidelines

There are two "bottom lines" to the R.O.P. process. The most obvious is, after full consideration, coordination, and integration with other resources and uses, the decision--the selected alternative. Less obvious is plan implementation. There must be appropriate instructions, guidelines, and decisions to carry out the intent of the plan. The interrelation with other resources and uses must be carried forward into decisions on where and what kind of development, treatment, and management will take place. Provision must be made to identify management actions necessary to accomplish the plan objectives, and to organize and budget these actions.

Development of appropriate management guidelines will necessarily occur near the end of the planning process. The implications of the various alternatives that are considered earlier in the process will be stored for reference to trigger certain guidelines. A "tickler" list of guidelines to consider for each R.O.S. class will be developed with the lead Forests and provided to the remaining National Forests.

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APPENDIX

January 22, 1980

DRAFT

RECREATION OPPORTUNITY PLANNING GUIDELINES FOR LAND AND RESOURCE MANAGEMENT PLANNING

> "Managing for recreation requires different kinds of data and management concepts than does most other activities. While recreation must have a physical base of land or water, the product--recreation experience--is a personal or social phenomenon. Although, the management is resource based, the actual recreational activities are a result of people, their perceptions, wants, and behavior."
>
> Final Report of the Committee of Scientists, February 22, 1979, as published in the Federal Register, Part V, May 4, 1979, page 26628.

Introduction

Forest Service policy requires that Land Planning and Management assures that National Forest System lands provide a variety of appropriate opportunities for outdoor recreation (FSM 2303.2). This does not mean that each unit of land will provide the entire array of appropriate opportunities, but that the total National Forest System land base will provide this variety. Each National Forest will establish its role in providing recreation opportunities as part of the Land and Resource Management Planning process. The roles of individual forests should be identified in Regional Plans and be in conformance with the National Role.

Outdoor recreation resource management planning in the Forest Service is conducted as an integral part of the Land and Resource Management Planning process specified in the Regulations for the National

Forest Management Act of 1976. The Recreation Opportunity Planning process will assure that (1) an appropriate variety of high quality recreation opportunities will be provided on National Forest lands to meet existing and anticipated public needs and (2) that the basic land and water resources will be integrally managed to assure a sustained supply of recreation opportunities. The process will utilize the Recreation Opportunity Spectrum (ROS) system to provide a framework on which to define the types of outdoor recreation opportunities the public might desire, and to identify that portion of the spectrum a given National Forest might be able to provide as input to the Management Situation and Formulation of Alternatives. This continum of opportunities is divided into six classes, (Figure 1), with each class defined in terms of a combination of physical, social, and managerial setting conditions as shown in Table 1.

Figure 1
Recreation Opportunity Spectrum (ROS)

Primitive (P)	Semi-Primitive Non-Motorized (SPNM)	Semi-Primitive Motorized (SPM)	Roaded Natural Appearing (RNA)	Rural (R)	Modern-Urban (MU

The National Forest System Land and Resource Management Planning Regulations call for the integrated management of public lands to provide and enhance a broad spectrum of recreation opportunities

TABLE 1.

RECREATION OPPORTUNITY SPECTRUM

The Recreation Opportunity Spectrum, with associated activity opportunities, recreational setting requirements, and experience opportunities that are highly proable for each spectrum class. This is a table of general descriptors of the three components of the spectrum classes. There might be specific activity exceptions to these general characteristics.

Spectrum Class	Activity Opportunities engaged in	Recreational Setting to realize	Experience Opportunities
Primitive (P)	Viewing Outstanding Scenery Enjoying Unique and/or Unusual Environments Hiking Cross-country ski touring and snowshoeing Horseback Riding Canoeing Sailing Other, nonmotorized watercraft use Swimming Diving (Skin or Scuba) Fishing Photography Camping	Area is characterized by essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other area users is minimal. The area is managed to be essentially free from evidence of man-induced restrictions and controls. Motorized use within the area is not permitted.	Extremely high probability of experiencing considerable isolation from the sights and sounds of man, independence, closeness to nature, tranquility, and self-reliance through the application of woodsman skills in an environment that offers a high degree of challenge and risk.
Semi-primitive non-motorized (SPNM)	Snowplay Hunting (big, small game, upland birds and waterfowl) Nature Study Acquiring General Knowledge/Understanding Unguided Hiking General Information	Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is not permitted.	High, but not extremely high, probability of experiencing the above listed natural environment elements.

Spectrum Class	Activity Opportunities engaged in	Recreational Setting to realize	Experience Opportunities
Semi-primitive motorized (SPM)	All of the activities mentioned in above Classes plus the following: Motor-driven ice and snowcraft ORV touring Power boating	Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other area users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is permitted.	Moderate probability of experiencing the above listed natural environment elements, except that there is a high degree of interaction with the natural environment. Explicit opportunity is available to use motorized equipment while in the area.
ROADED NATURAL APPEARING (RNA)	All of the activities mentioned in above Classes plus the following: Picnicking Gathering Forest Products Auto Touring Water Skiing & Other Water Sports Automobile Camping Trailer Camping Viewing Interpretive Signs Organization Camping Lodges Power Boating Resort-Commercial Public Services Resort-Lodging	Area is characterized by predominantly natural appearing environments with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.	About equal probability to experience affiliation with other user groups and for isolation from sights and sounds of man. Opportunity to have a high degree of interaction with the natural environment. Challenge and risk opportunities associated with more primitive type of recreation are not very important. Practice and testing of outdoor skills might be important. Opportunities for both motorized and non-motorized forms of recreation are possible.

Spectrum Class	Activity Opportunities engaged in	Recreational Setting to realize	Experience Opportunities
rural (R)	All of the activities mentioned in above classes plus the following: Competion Games Ice Skating Scooter-Motorcycle Use Bicycling Spectator Sports Jogging Passive use of developed parks and open space Picnicking Outdoor concerts	Area is characterized by substantially modified natural environment. Resource modification and utilization practices are primarily to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of man are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided for away from developed sites. Facilities for intensified motorized use and parking are available.	Probability for experiencing affiliation with individuals and groups is prevalent as is the convenience of sites and opportunities. These factors are generally more important than the setting of the physical environment. Opportunities for wildland challenges, risk-taking, and testing of outdoor skills are generally unimportant except for specific activities like downhill skiing, for which challenge and risk-taking are important elements.
Modern-urban (MU)	All of the activities mentioned in above Classes.	Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of man, on-site, are predominant. Large numbers of users can be expected, both on-site and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.	Probability for experiencing affiliation with individuals and groups is prevalent, as is the convenience of sites and opportunities. Experiencing natural environments, having challenges and risks afforded by the natural environment, and the use of outdoor skills are relatively unimportant. Opportunities for competetive and spectator sports and for passive uses of highly man-influenced parks and open spaces are common.

to meet public needs (36 CFR 219.12 (i). Recreation Opportunity Planning, when integrated with the Land and Resource Management Planning process, Chart 1, provides a framework for recreation planning, management, and monitoring in accordance with these regulations (FSH 1909.21).

The inventory and analysis procedures in Recreation Opportunity Planning (ROP) provide data to describe the current situation, analysis of issues, concerns and opportunities and aid in determination of outdoor recreation public needs. ROS on the other hand, helps clarify the Forest Service role, particularly in relation to adjacent jurisdictions, as well as to provide a framework from which to organize and categorize issues, concerns and opportunities relating to outdoor recreation.

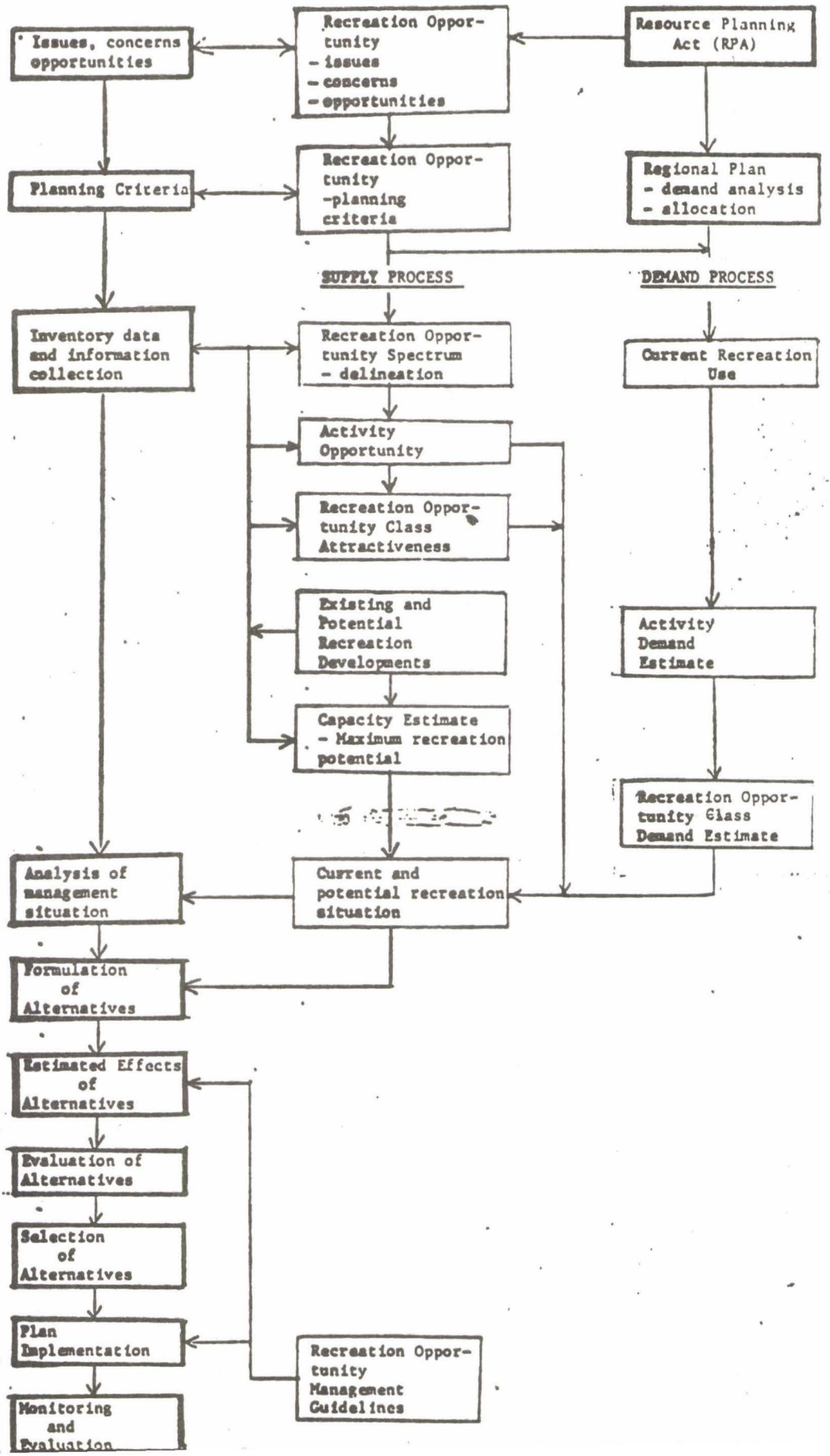
Most of the information required to conduct the inventory is readily available from existing data necessary for other phases of land management planning. It requires a minimum of field checks, thus reducing total costs.

The current situation is described in terms of six recreation opportunity classes the land base might be capable of providing. Each opportunity class characterizes recreation activities, settings and experiences. The generalized ROS description of these interrelationships was presented in Table 1. (The Table is illustrative only, and does not give prescriptive guidelines as to how recreation opportunities should be managed).

CHART 1

Integration of Recreation Opportunity Planning

With the Land and Resources Management Planning Process



In Recreation Opportunity Planning the ROS inventory system provides a tool to identify the types of recreation opportunities available on land or water areas. The ROS classes provide a basis for trade-off analysis, a framework to establish management objectives for the recreation resource and a basis to guide recreation project planning. Monitoring can be accomplished by evaluating the objectives established for each class and determining whether desired outputs are obtained.

The Recreation Opportunity Planning process consists of two basic components: supply and demand.

I. SUPPLY

The supply component identifies the current and potential recreation supply condition. Supply considers the physical, social and managerial attributes of the recreation setting, and the capacity of this resource to provide outdoor recreation opportunities.

A. ROS CLASS DELINEATION

The land and water areas of the planning area (National Forest or Grassland) will be mapped to identify the existing ROS classes based on the physical, social and managerial setting criteria.

1. Physical Setting - The physical setting is that condition on the ground which relates to the amount of environmental modification from human activity.

a. Remoteness from the sights and sounds of human habitation. This is used as an indicator of the opportunity to be free from social interaction and away from urbanizing influence. To identify remoteness:

1) On a base map or overlay delineate all existing roads and trails. Distinquish between primitive roads and those better than primitive.

2) Using the distance guidelines of Table 2 develop a remoteness overlay. This is only a guide and exact lines should reflect topography and vegetation differences which may produce the desired effect at a closer or further distance. For example, relatively flat terrain with low tree cover or large bodies of water may require greater distances to achieve equivalant screening, while deep canyons or heavily wooded terrain might provide sufficient screening with less distance.

Table 2

Remoteness Criteria

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural Appearing	Rural	Modern-Urban
3 miles from roads, railroads or trails with motorized use	1/2 - 3 miles from roads, railroads or trails with motorized use; can include primitive roads and trails usually closed to motorized use	0-1/2 mile from primitive roads or trails used by motor vehicles, but greater than 1/2 mile from roads better than primitive	0-1/2 mile from roads better than primitive, railroads, and trails with motorized use	No distance criteria	

b. Size of area - is used as an indicator of the opportunity for desired self or intra-group reliance in natural environmental settings.

The size criteria, Table 3, should be applied to the overlay developed in for Remoteness. The size criteria will identify areas which may qualify as primitive or semi-primitive ROS classes. Adjust the class lines to absorb areas to small to meet the size criteria.

Table 3

Size Criteria

Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural Appearing	Rural	Modern-Urban
5,000 Acres	2,500 Acres*	2,500 Acres	No size criteria		

*Smaller if contiguous to primitive class area.

c. Evidence of Humans is used as an indicator of the opportunity to recreate in environmental settings having varying degrees of human influence or modification.

Apply the evidence of humans criteria as described in Table 4 to make sure the nature and amount of human impact on the landscape is appropriate for the class designation of the inventory overlay. If the evidence of humans is more dominant than what the tenatively designated ROS class allows, adjust the class boundaries on the overlay so the class designations accurately reflect the existing situation. The result of this step is the completion of a physical setting map.

Some Forests have found it useful to display the human modifications for the primitive and semi-primitive nonmotorized and motorized classes on a separate overlay to help accomplish this step. This would include all major physical developments such as utility lines, dams, radio relay towers, airports, railroads, timber harvest clearcut areas over 10 acres (but not areas impacted by other timber harvest methods), chained areas or other type conversions, mines, rock pits, water facilities including those used for domestic range animals, and lasting impacts of fire suppression or prevention measures such as presuppression firebreaks, or roads created from fire suppression firebreaks, or roads created from fires suppression (acreages actually burned should not included). Most modifications are associated with roads, therefore, this will usually be a small task.

Table 4
Evidence of Humans Criteria*

Primitive	Semi Primitive Non-motorized	Semi-Primitive Motorized	Roaded Natural Appearing	Rural	Modern-Urban
Changes in the landscape are not evident to the average person unless pointed out. Appear to be unnoticed as viewed by pedestrian observer wandering through the area.	Changes in the the landscape are noticed by the average pedestrian in foreground but do not attract attention. Natural landscape remains dominant to the pedestrian observer.	Changes in the landscape are noticed by the average slow moving vehicular oriented observer but do not attract attention. Natural but do not attract attention. Natural landscape remains dominant to slow moving vehicular oriented observer.	Landscape is predominantly natural appearing forest, shrub, or grassland. Attractive pastoral features may also play an important but minor role. Changes in this landscape may attract attention to the pedestrian and slow moving observer but remain unnoticed or visually subordinate to the moderate to high speed observer.	Landscape may be predominantly pastoral or agricultural. Forest, shrub, or grassland may play an important but minor role. Human activities may be easily noticed or dominant to the moderate to high speed observer. Such activites are in scale with the pastoral or agricultural landscape, plus borrow form and edge effect to appear appropriate.	Landscape may be almost totally human-created but also may be attractive in appearance. Natural or pastoral landscape may still be an element.
Evidence of trails is acceptable, but should not exceed standard necessary to carry expected use.	Motorized use of trails and primitive roads is not acceptable. Evidence of trails is acceptable.	Motorized use of trails and primitive roads is acceptable.			
Landscape is essentially an unmodified natural environment.			Structures are generally scattered, remaining visually subordinate to the natural appearing landscape.	Structures may range from scattered to small dominant clusters.	

* Temporary environmental modifications should not be inventoried as "evidence of humans," but noted on the social and managerial overlay (p. 13).

2. Social Setting - The social setting reflects that condition which indicates the amount use and social interaction. This indicates the amount of contact between individuals or groups. Two basic criteria are used:

a. User Impact which indicates the wear and tear on the resources.

Apply the user impact criteria from Table 5 to areas which presently receive use. Consider both developed sites and adjacent use areas.

b. User Density is used as an indicator of the frequency of user contact with one another

Apply the User Density criteria from Table 5. Again consider developed sites and areas of concentrated use.

The results of these steps is an overlay which will indicate Social Setting.

3. Managerial Setting - The managerial setting provides an indication of the amount and type of administrative action taken to manage current recreation use. As described in Table 5 the only criteria used is the "managerial regimentation and noticeability". Place this information on the Social setting overlay but label it clearly for future identification.

Table 5
SOCIAL AND MANAGERIAL CRITERIA

SOCIAL Element	Recreation Opportunity Spectrum Classes: Modern-urban	Semi-rural	Roaded Natural-Appearing	Semi-primitive motorized	Semi-primitive non-motorized	Primitive
Evidence of user impacts	Impacts from wear and tear on resource facilities and from littering are common.	Impacts are common, but less so than for modern-urban class.	Impacts common at concentrated sites and moderately common in dispersed use areas.	Impacts limited mostly to roads and trails for motorized use.	Moderate evidence of user impacts.	Little evidence of user impacts.
Frequency of user encounters or density of use.	Large numbers of users on-site and in nearby areas.	Frequency of contact is: -Mod. to High: In developed sites, on roads& trails,& water surfaces. -Mod: away from developed sites	Frequency of contact is: -Mod: On roads and trails. -Low to Mod: Away from roads.	Low to moderate contact frequency.	5-10 parties/ day encountered on trails and 6 or less parties visible at camp site.	Less than 6 parties per day encountered on trail and less than 3 parties visible at campsite.
MANAGERIAL						
Managerial regimentation and noticeability	Controls obvious and numerous, largely man-made. Law enforcement may be highly visible.	Controls obvious and numerous, largely in harmony with the man-made environment.	On-site controls (barriers and permits) are noticeable, but harmonize with the natural environment.	On-site restrictions and controls present but subtle. Motorized equipment used for maintenance and construction.	On-site restrictions and controls present but subtle. Motorized maintenance equipment not permitted except for fire suppression.	On-site freedom allowed. Controls off-site, enforcement incidental. Motorized maintenance equipment not permitted except for fire suppression.

The result of mapping the physical, social and managerial setting is a catagorization of the principal factors within management control which may affect the recreation experience. The objective is to have all three settings in the same ROS class. Settings which are inconsistent provide a basis for development of management alternatives which may bring settings into the same ROS class. This is discussed in more detail in FSM 1909.21, the Land and Resource Management Planning Handbook.

B. ROS CLASS ATTRACTIVENESS

The attractiveness rating is a general quality evaluation to determine the recreation values of the landscape. The premise is that landscapes with the most variety of diversity (landforms, vegetation patterns, water forms and rock formations) also have the greatest attractivness for recreation use and enjoyment. Variety class rating, as explained in National Forest Landscape Management Volume 2, Chapter 1 is used to determine the attractiveness rating.

C. ACTIVITY OPPORTUNITY

Recreation activities provide opportunities for users to attain desired experience. People participate in certain activities in given recreation settings to realize certain experiences.

1. Activity Identification - Use appropriate RIM codes definitions and codes to identify activities.

a. Existing Activities - Identify and inventory existing activities by ROS class. Activities which are inappropriate for the existing ROS class due to National direction (the role of the area in providing recreation opportunities) or inconsistencies they create in the ROS physical, social, or managerial setting components should be identified for action in the management alternatives.

b. Potential Activities - Identify on the activity overlay those potential activities which should be considered in alternatives. Only consider those activities which were identified in the issue, concern, and opportunity planning step of the Land and Resource Management Planning process.

2. Activity Criteria - All activities considered must meet the following criteria.

a. The resource must be capable of withstanding the impact of the use.

b. The activity is suitable for the area as defined in the activity attractiveness criteria (not developed at this time).

c. There must be a demonstrated public need. (This is as opposed to demand i.e., the public may demand all kinds of activities but only those which are suited to the National Forest and the role of the Forest Service and planning unit, will be considered).

d. Is suitable as defined in National Direction.

D. RECREATION DEVELOPMENTS

1. Existing - Indicate by kind and capacity on an overlay where Forest Service, other public agencies, and private recreation developments exist. Include developments on private and other lands within and adjacent to the planning area. Consideration must be given developments outside the Forest boundary when they may affect plan alternatives.

2. Potential - Map on the overlay those potential development sites for only those uses or activities identified in the issue, concern, and opportunity step of the planning process. Utilize information previously gathered if currently useful (NFRS, composite plans, environmental assessments, etc.) for site identification.

E. CAPACITY ESTIMATE

Determine the maximum recreation potential for each ROS class. This is a measure of the maximum opportunity supply the Forest can provide. Sum by ROS class the PAOT theoretical capacity of all existing developed sites and the maximum PAOT capacity of the dispersed area within the class. To obtain this latter estimate it will be necessary to develop ROS class capacity criteria which are applicable to the Forest area. Knowledge and consideration of the actual Forest terrain and landscape are required in establishing the criteria, since, within broad guidelines the estimate requires the professional judgement of the planner using

all available data. The recreation capacity of a given land area is a function of the area's topography, vegetative cover, and soil stability interacting in such a way that the effects of use fall within acceptable limits, this protect resources from unacceptable change and assures quality experience opportunities for the ROS classes. The principal factors affecting recreation resource capacity are usually:

1. Land type: Topography, erodibility, productivity, drainage, geologic hazard, and resistance to compaction, etc.
2. Vegetative type: Height and density of cover, reproducibility, resiliency to use, etc.
3. Social setting: Amount and type of management restrictions or controls.

Information on vegetation types and patterns, landforms, soils and perhaps aspect may already be mapped as part of the Land and Resource Management Planning inventory, and the Recreation Opportunity Spectrum inventory. By combining this information with the ROS relationships between setting, activity, and experience opportunities (Table 1), it is possible to make an estimate of use capacity.

Lower capacities exist where the landscape is open (little vegetation screening and flat topography) and where there are fragile soils or vegetation. Higher capacities exist where the landscape is closed and resistent and where there are more highly developed recreation facilities.).

Lower capacities exist in the "primitive" opportunity class than in the "semi-primitive," lower in the "semi-primitive than the "roaded naturally appearing," and so forth because of the varying amount of "freedom from social interaction" occuring through the spectrum.

Table 6 gives an example of capacity coefficient ranges (total class capacity divided by acres in the class) which has been developed from a number of recreational settings already inventoried, using the ROS. These capacity coefficients may be applicable in additional settings, or it may be necessary to establish new coefficient values for the planning area.

Once the maximum potential supply of activity opportunities by ROS class is estimated in PAOT it is necessary to convert PAOT's into Recreation Visitor Days in the current and potential recreation situation step in order to compare supply with RVD units of demand, and for the LMP monitoring and evaluation process. PAOT's are converted into RVD's by considering season of use and the ratio of day use to overnight use. RVD's = PAOT (MS x PU x LOS/12) where MS = managed season of use in days; PU = pattern of use: the relationship between the average weekend use and average weekday use of sites and/or areas; and LOS = length of stay: length of time the area or site is occupied in hours per 24 hour period.

Table 6
An example of
Capacity Coefficient Ranges
(in PAOT/Acre)

	Primitive	Semi-Primitive Non-Motorized	Semi-Primitive Motorized	Roaded Natural Appearing	Rural	Modern-Urban
High	.025	.083	.083	2.500	7.500	N/A
Low	.002	.008	.008	.083	.830	N/A

II. DEMAND

The demand component indentifies the current and potential demand for recreation opportunities. Since the concept of planning and managing settings to provide experience outcomes is relatively new, limited demand information is directly available on these measures of recreation outputs. Demand is defined by the National Academy of Sciences as follows:

> Recreation demand is a conditional statement of the participation that would result at a given time and in a given place under a specific set of conditions and assumptions about an individual and his or her social relationships and the availability of recreation resources.

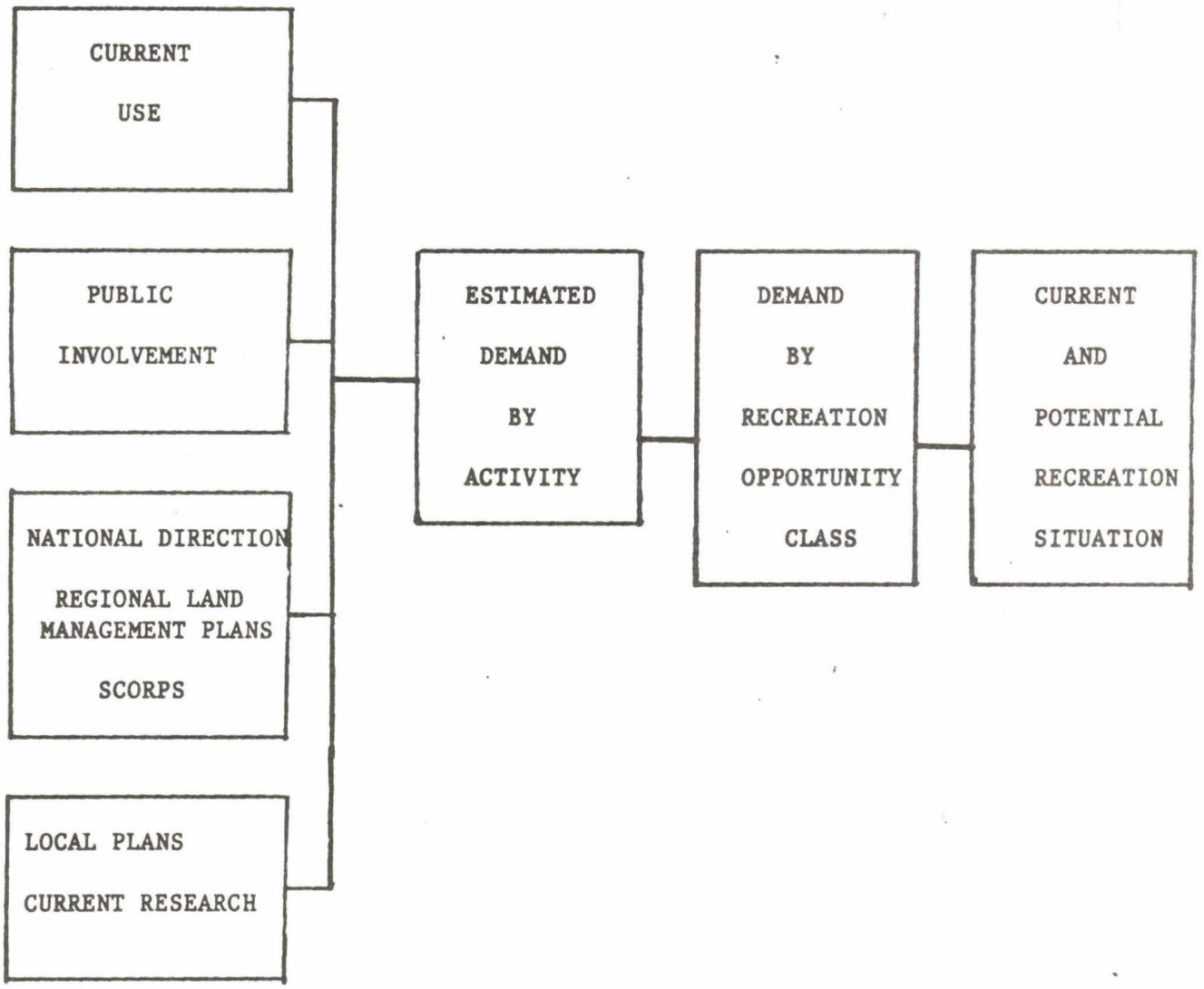
Most recreation "demand surveys" in reality measure the extent of current participation in various recreational activities by sampling the using population. Unfortunately, in most current planning situations this "recreation participation survey" methodology will continue to be

the determiniant of demand. The constraints placed upon the planners of time, dollars, the availablility of satisfactory survey techniques, and the limitation on the use of surveys imposed by OMB generally prohibit the development of quality demand data. For now the demand component should be done through estimates of demand for activity opportunities which are then summarized by ROS class. (When techniques are developed the eventual goal is to express demands in terms of both activities and experiences.)

For the present, demand estimation will be a product of current use adjusted by the needs of both the current and the potential users as determine through a sampling of the market population. These estimates are adjusted according to local and regional needs as identified in Regional Plans, by national direction and by other recreation planning documents (Chart 2).

Chart 2

Demand Process



A. DEMAND DATA SOURCES

1. CURRENT USE - Current use will be obtained from the RIM system (2300 -1K, Recreation Resource Activity Crosswalk). Use figures will be recorded by activity opportunities and grouped by recreation opportunity classes.

2. PUBLIC INVOLVEMENT - In predicting demand the current use should be adjusted to reflect concerns expressed by the public through the identification of issues, concerns, and opportunites. Of particular concern is recognition of potential users who for various reasons are not using the National Forests for their recreation pursuits. Frequently the limiting factors are social or cultural differences, economic availability, knowledge or awareness, or other factors in which program adjustments can affect future use patterns. The National Forest System Land and Resources Management Planning Regulations, Section 219.5(b) and 219.7, describe the process to obtain the information. Where information exists for the needs of market population this should be incorporated.

3. REGIONAL LAND AND RESOURCES MANAGEMENT PLAN - Demographic information which portrays recreation demand will be developed in Regional Land and Resource Management Plans (210.10 (b) (8)). Information should include preferences of both current user and potential user groups and their particular needs. Sources of information include SCORP, past regional and subregional plans.

Demand should be allocated to individual Forests based upon their role in the total recreation picture. Allocations should consider the role and availability of opportunities on private and other public agency lands as well.

In cases where regional plans are not available with the required demand information, Forests should develop their own demand information necessary to respond to the issues, concerns and opportunities.

4. LOCAL PLANS - Additional local demand information can be obtained from State, county and community planning, and from past Forest studies, composite plans, and environmental assessments or impact statements. This will help in identifying present and predicted trends. Current research applicable to the planning area should also be used in identifying trends.

B. ESTIMATED DEMAND BY ACTIVITY OPPORTUNITY

All information collected and analyzed for estimating recreation demand should be arrayed by activity opportunity. Activities are identified in the RIM Handbook, FSH 2309.11, page 192--22.

C. DEMAND BY RECREATION OPPORTUNITY CLASS

The demand by activity opportunity should now be arrayed by recreation opportunity class. This information will provide the planner with the type of experience the public is seeking. Once future demands for activity opportunities or groups of activity opportunities have been projected for the market area of the plan, these estimates should be apportioned using judgement. The final product is a table showing projected demands for each recreation opportunity class by five year periods during the planning period. In some cases separate tables

will need to be prepared for the summer and winter use seasons. This information will be used in describing the current and potential recreation situation for the planning area. (Chart 1).

III. CURRENT AND POTENTIAL RECREATION SITUATION

The current and potential Recreation Situation is the pulling together of the information developed in the Supply and Demand components of Recreation Opportunity Planning. The desired outcome is a display of the capability of the resource to provide certain kinds and amounts of recreation opportunities and the need for recreation opportunities. This will provide a listing of the surplus and deficit information by recreation opportunity class and the recreation activity managed for the actual and desired experiences, i.e., peoples' perceptions, needs, and behavior. Activities are the vehicle which will provide these experiences.

Priorities will need to be established to aid in allocation of the available forest resources. These priorities should be based on the need for these activities as determined by National priorities and objectives, the attractiveness and capability of a piece of ground to provide kinds of activity opportunities, and the degree of demand as identified through the demand process.

Needs reflect what must be provided in recreation oppotunities to meet national goals for public health and welfare, and to reflect the role of the Forest Service in meeting its share of these national goals. Demand reflects what the public wants irrespective of need priorities.

Recreation Management Policies, FSM 2303, along with other direction in FSM 2300 can serves as a foundation of reference and should assist the planner in separating demand from need.

In the current and potential recreation situation, a display should be developed of existing and potential developments by recreation opportunity class which will be needed to meet the identified deficits, this information will used in the development and evaluation of alternatives.

These displays and information are use as direct input for the Analysis of the Management Situation (219.5 (e)) and the Formulation of Alternatives (219.5 (f)) steps of the Land and Resource Management Planning process.

IV. ROS MANAGEMENT GUIDELINES

Guidelines for the management of ROS classes are to be developed. These guidelines will be based on the physical, social and managerial characterists of the setting. By providing various settings, managers can provide the needed diversity to assure visitors the range of experience they seek.

Management objectives are established as part of the Land and Resource Management Plan. These objectives should specify what the desired conditions are to be within the identified recreation opportunity class. This will allow the manager to know precisely what it is he or she is working towards, and whether or not any given condition is consistent with the established objectives for the area.

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